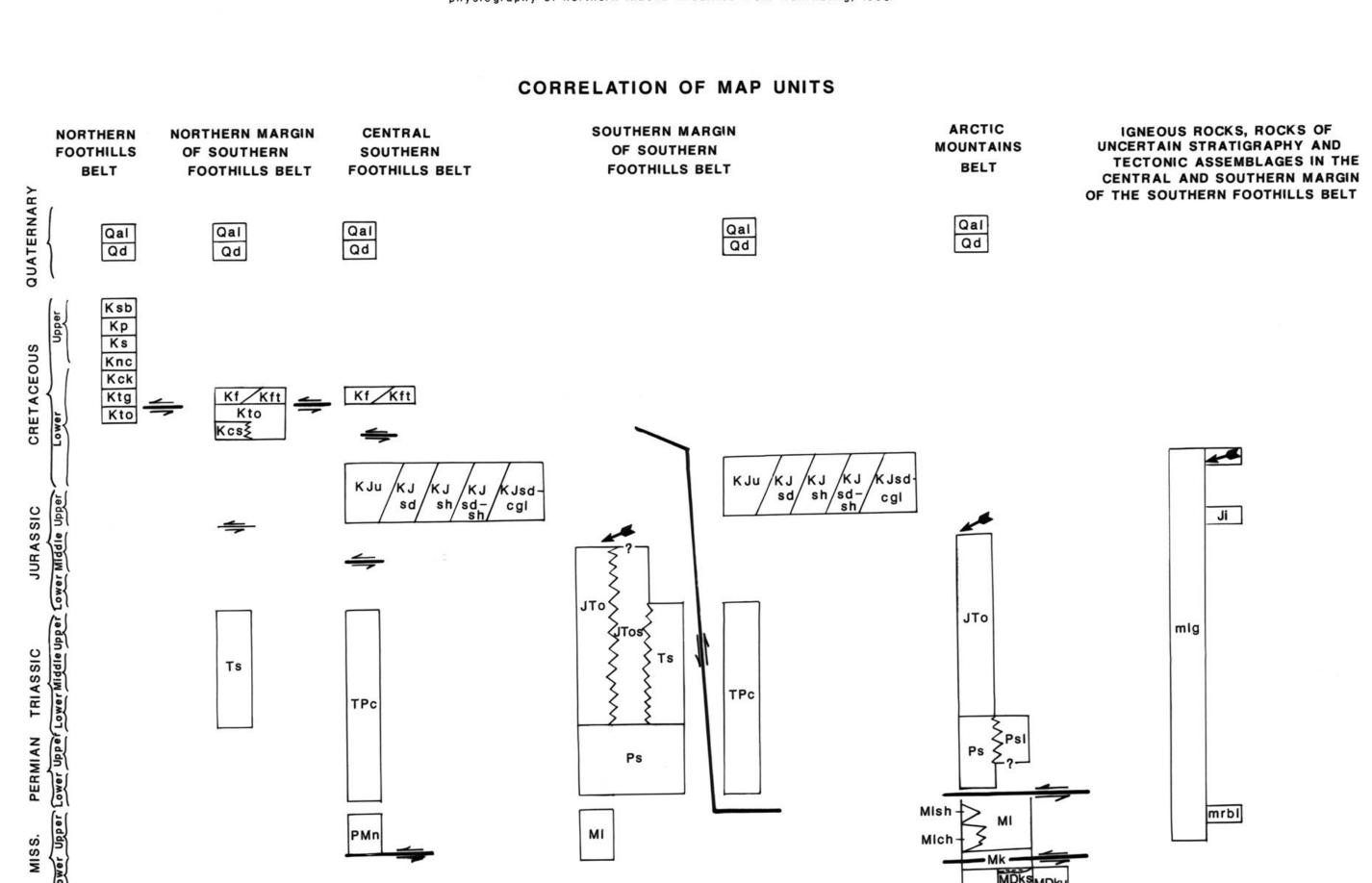
Index map showing location of Chandler Lake quadrangle relative to Alaska and physiography of northern Alaska (modified from Wahrhaftig, 1965)



MAP SYMBOLS

Northern Foothills Belt

Northern margin of the Southern Foothills Belt

Southern margin of the

Southern Foothills Belt

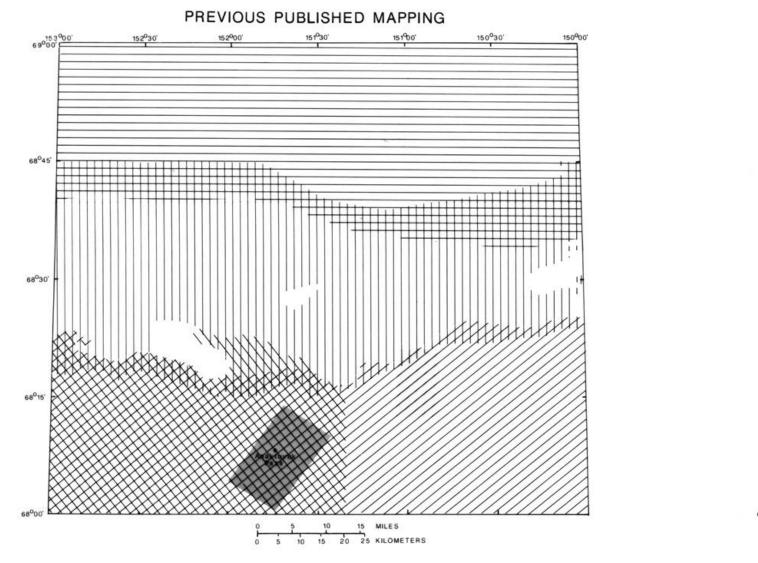
Arctic Mountains Belt

Central Southern

Foothills Belt

measured strike and dip strongly asymmetrical syncline, double arrow identifies steeper dipping liab overturned anticline overturned syncline overturned syncline thrust fault, teeth on upper plate, dotted where concealed, dashed where approximately located, querried existence uncertain vertical beds, measured vertical beds, estimated anticline, arrow shows direction of plunge, dashed where removed by erosion, dotted where concealed. strongly asymmetrical anticline, double arrow identifies steeper dipping liab overturned syncline overturne

SOURCES OF MAPPING



syncline, arrow shows direction of plunge, dotted where concealed

INDEX MAP FOR CORRELATION OF MAP UNITS

- Bowsher, A.L. and Dutro, J.T., Jr., 1957, The Paleozoic section in the Shainin Lake area, central Brooks Range, Alaska: U.S. Geological Survey Professional Paper 303-A, p. 1-39.

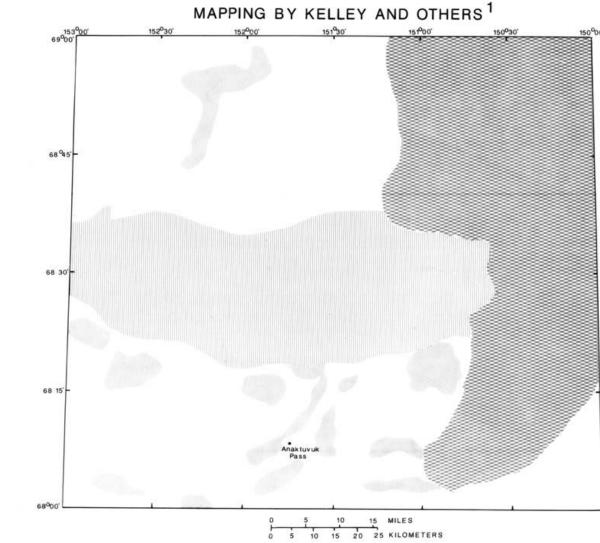
 Brosgé, W.P., Reiser, H.N., Dutro, J.T., Jr., and Nilsen, T.H., 1979, Geologic map of Devonian rocks in parts of the Chandler Lake and Killik River quadrangles, Alaska: U.S. Geological Survey Open-File Report 79-1224, scale 1:2,000,000 l sheet.
- Brosgé, W.P., Reiser, H.N., Patton, W.W., Jr., and Mangus, M.D., 1960, Geologic map of the Killik-Anaktuvuk River region, Brooks Range, Alaska: U.S. Geological Survey Open-File Report 60-21, scale 1:96,000, 2 sheets.
- Detterman, R.L., Bickel, R.S., and Gryc, George, 1963, Geology of the Chandler River region, Alaska: U.S. Geological Survey Professional Paper 303-E, p. 223-326.

50, no. 5, p. 952-980.

- Patton, W.W., Jr., and Tailleur, I.L., 1964, Geology of the Killik-Itkillik region, Alaska: U.S. Geological Survey Professional Paper 303-G, p. 409-500.

 Porter, S.C., 1962, Geology of Anaktuvuk Pass, central Brooks Range, Alaska: Final Report, Arctic Institute of North America Subcontract No. ONR-240 and ONR-264, 276 p., 3
- Report, Arctic Institute of North America Subcontract No. ONR-240 and ONR-264, 276 p., 3 pl.

 Porter, S.C., 1966, Stratigraphy and deformation of Paleozoic section at Anaktuvuk Pass, central Brooks Range, Alaska: American Association of Petroleum Geologists Bulletin, v.



Correlation of map units shows time-stratigraphic correlation of 5 discrete and areally restricted rock assemblages. The assemblages occur in east-west trending belts that correspond

to 3 regional physiographic belts, Northern Foothills, Southern Foothills, and Arctic Mountains Belts of Wahrhaftig

(1965) (see Location Map); single assemblages underlie the

Although structural relations between assemblages are not well exposed, the correlation diagram shows observable and

Extensive décollements correspond to the more bold shear symbols whereas smaller symbols correspond to less extensive

transitions, and litho-stratigraphic sequences. The diagram shows location of decollements and overthrust relations.

Northern Foothills and Arctic Mountains Belts and 3

assemblages underlie the Southern Foothills Belt.

reasonably inferrable structural relations, facies

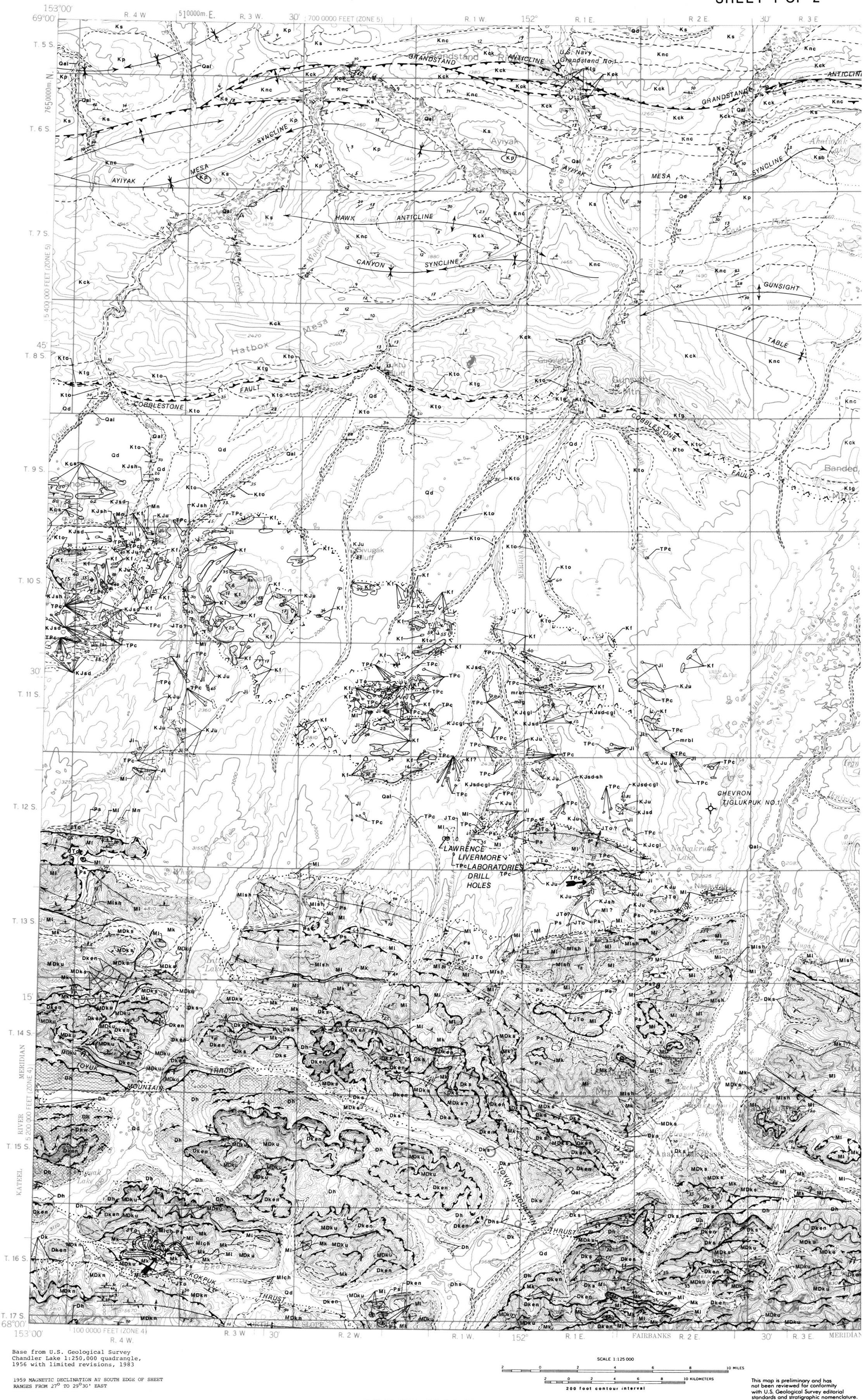
¹J.S. Kelley, A.K. Armstrong, J.R. Bergquist, W.H. Nelson, C.G. Mull, D.M. Peterson, 1982; J.S. Kelley, W.P. Brosgé, D. Bohn, W.H. Nelson, 1983; J.S. Kelley, M.W. Reynolds, J.T. Dutro, Jr., W.H. Nelson, B. Csejtey, Jr., D. Bohn, 1984: J.S. Kelley, G.D. Stricker, S.W. Nelson, W.H. Nelson, B. Csejtey, Jr., D. Bohn, 1985; J.S. Kelley, S.M. Karl, D. Bohn, G.A. Lancaster, 1986.

- Geology mapped on color infrared aerial photographs at 1:60,000, transferred to topographic base maps at 1:63,360 with a Kern PG-2 stereo plotting instrument, and abstracted and transferred to this base map.

 Geology mapped on black and white aerial photographs at 120,000 and transferred by inspection to this base map.

 Geology observed at scattered field stations, short foot traverses, and believe to the stations.
- Geology observed at scattered field stations, short foot traverses, and helicopter observations.

 Geology interpolated from published sources, aerial photographs, geology in areas more thoroughly investigated, and scattered helicopter observations.



WEST HALF
PRELIMINARY GEOLOGIC MAP OF THE CHANDLER LAKE QUADRANGLE, ALASKA
BY J.S. KELLEY 1988